



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
ADDRESS: COMMERCIAL RELATIONS DIVISION
WASHINGTON, D.C. 20514
WWW.USPTO.GOV

APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
10 057,009	01 24 2002	Wei-Su Chen	64,600-095	3605

7590 01 27 2003

TUNG & ASSOCIATES
838 W. Long Lake Road, Suite 120
Bloomfield Hills, MI 48302

EXAMINER

HOANG, QUOC DINH

ART UNIT	PAPER NUMBER
----------	--------------

2818

DATE MAILED: 01 27 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/057,009

Applicant(s)

CHEN ET AL.

Examiner

Quoc D Hoang

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcoux et al., (U.S. Pat 6,414,585) in view of Gardner., (U.S. Pat 6,452,247).

Regarding claims 11 and 16, Marcoux et al., teach on column 1-14 a method of forming a fabrication comprising the steps of providing a substrate 2310 (col. 10, lines 44-50 and Fig. 23A); and forming over the substrate 2310 a spirally patterned conductor layer 2355, the spirally patterned conductor layer 2355 being spirally topographically tapered in a vortex shape (col. 10, lines 52-36 and Figs. 23A-B).

Marcoux et al., do not disclose micro fabrication.

Gardner., teaches on column 1-7 forming a microelectronic device comprising providing a microelectronic substrate 150 (col. 1, lines 25-60 and col. 5, lines 45-54 and Fig. 6); and forming over the microelectronic substrate 150 a conductor layer 154 (col. 5, lines 45-54 and Fig. 6).

Marcoux et al., and Gardner., are combinable because they are from the same filed of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to form a microelectronic device. The motivation for doing so is to

reduce the resistance and also the size of the device (col. 1, lines 30-34). Therefore, it would have been obvious to combines Marcoux et al., with Gardner to obtain the invention of claims 11 and 16.

Regarding claims 12 and 17, Marcoux et al., teach the spirally patterned conductor layer 2355 is an inductor (col. 10, line 44).

Regarding claims 13 and 18, Marcoux et al., teach a pointed end of the vortex is directed towards the substrate 2310 (see Fig. 23A).

Regarding claims 14 and 19, Marcoux et al., teach a pointed end of the vortex is directed towards the substrate 2310 without teaching the pointed end of the vortex is directed away the substrate. However, the shape of the vortex is considered an obvious design optimization and do not lend novelty of to the claimed process.

Regarding claims 15 and 20, Marcoux et al., teach the vortex shaped has an opening end across dimension from about 50-900 microns and a height of from about 50-600 microns (col. 5, lines 20-33 and Fig. 9B).

Device claims 1-10 are also rejected as the same reasons as above rejected claims 11-20.

Conclusion


3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quoc Hoang whose telephone number is (703) 306-5795. The examiner can normally be reached on Monday-Friday from 8.00 AM to 5.00 PM.

Application/Control Number: 10/057,009
Art Unit: 2818

Page 4

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms., can be reached on (703) 308-4910.

Quoc Hoang ^{by}
Patent examiner/AU 2818.


Quoc Hoang
Patent Examiner
Technology Center 2800